

REMARKS

Claims 1, 6, 7, and 22 have been amended. No new matter has been added. Support for the amendments to claim 1 is found at paragraphs [0016], [0027], [0028], and [0031] of the as-filed specification. Claims 6, 7, and 22 have been amended to clarify the invention and to improve antecedent basis.

Applicant notes the filing of an Information Disclosure Statement herein on November 25, 2003, and notes that no copy of the PTO-1449 was returned with the outstanding Office Action. Applicant respectfully requests that the information cited on the PTO-1449 be made of record herein.

Additionally, Applicant notes that the Office Action Summary indicated the attachment of a Notice of References Cited (PTO-892) with the current office action. However, no PTO-892 was received when copies of the references were received. Applicant respectfully requests that a copy of the PTO-892 be sent to the undersigned attorney. Applicant also notes the attachment of a document entitled "Listing of patents received from Examiner" with the current office action. Applicant requests clarification of this document and respectfully requests that the listed references be made of record.

The Office Action mailed December 9, 2003, has been received and reviewed. Claims 1-14 and 16-73 are currently pending in the application, of which claims 1-10, 16-19, 22, 66, and 67 are currently under examination. Claims 11-14, 20, 21, 23-65, and 68-73 are withdrawn from consideration as being drawn to a non-elected invention. Claims 26-65 and 70-73 have been canceled without prejudice to the filing of one or more divisional applications reciting the subject matter of these claims. Applicant has amended claims 1, 6, 7, and 22, canceled claims 9, 66, and 67, and respectfully request reconsideration of the application as amended herein.

Applicant herein acknowledges the restriction requirement in the above-referenced application and affirms the election to prosecute the claims of Group I, claims 1-25, without further traverse. Further, Applicant herein acknowledges the perfected election of species to be Example 1 of Table I of the specification on page 16, and further in detail on page 13 of the specification. Claims 1-10, 16-19, 22, 66, and 67 stand rejected.

35 U.S.C. § 112 Claim Rejections

Claims 1-10, 16-19, 22, 66, and 67 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 9, 66, and 67 have been canceled, rendering the rejection moot as to these claims. Applicant has amended the claims and respectfully requests that the rejection as to the remaining claims be withdrawn.

Claims 1-10, 16-19, 22, 66, and 67 stand rejected under 35 U.S.C. § 112, first paragraph, because the specification is allegedly not enabled such that a person skilled in the art could practice the invention commensurate in scope with the claims. Claims 9, 66, and 67 have been canceled, rendering the rejection moot as to these claims. Applicant has amended the claims and respectfully requests that the rejection as to the remaining claims be withdrawn.

35 U.S.C. § 103(a) Obviousness Rejections

Obviousness Rejection Based on U.S. Patent No. 5,633,476 to Coiffe, U.S. Patent No. 6,093,269 to Lundstrom et al., U.S. Patent No. 4,238,253 to Garner and U.S. Patent No. 4,915,755 to Kim in view of U.S. Patent No. 5,034,073 to Barry et al., U.S. Patent No. 5,569,875 to Fey and U.S. Patent No. 3,770,524 to Walker et al.

Claims 1-10, 16-19, 22, 66, and 67 stand rejected under 35 U.S.C. § 103(a) ("Section 103") as being unpatentable over U.S. Patent No. 5,633,476 to Coiffe ("Coiffe"), U.S. Patent No. 6,093,269 to Lundstrom *et al.* ("Lundstrom '269"), U.S. Patent No. 4,238,253 to Garner ("Garner"), and U.S. Patent No. 4,915,755 to Kim ("Kim") in view of U.S. Patent No. 5,034,073 to Barry *et al.* ("Barry"), U.S. Patent No. 5,569,875 to Fey ("Fey") and U.S. Patent No. 3,770,524 to Walker *et al.* ("Walker"). Claims 9, 66, and 67 have been canceled, rendering the rejection moot as to these claims. Applicant respectfully traverses this rejection as to the remaining claims, as hereinafter set forth.

M.P.E.P. 706.02(j) sets forth the standard for a Section 103 rejection:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references

themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

The obviousness rejections of claims 1-8, 10, 16-19, and 22 are improper because the cited references do not teach or suggest all the limitations of the claimed invention.

As amended, independent claim 1 recites a solid pyrotechnic composition that comprises about 40 weight percent to about 90 weight percent oxidizer particles. The oxidizer particles have a mean particle size of not greater than about 30 microns and comprise at least one of an alkali metal nitrate and ammonium nitrate and at least one of an alkali metal perchlorate and ammonium perchlorate. The solid pyrotechnic composition also comprises organic crystalline particles accounting for about 10 weight percent to about 60 weight percent of a total weight of the solid pyrotechnic composition. The organic crystalline particles comprise at least one of phenolphthalein, an organic crystalline compound derived from a reaction between a phenolic compound and phthalic anhydride, fluorescein, 1,5-naphthalenediol, anthraflavic acid, and terephthalic acid. The solid pyrotechnic composition is also free of sulfur.

The Examiner relies on the primary references as teaching "compositions which contains oxidizer(s) and fuel" and the secondary references as teaching "variation of particle size." Office Action of December 9, 2003, p. 5. However, none of the cited references teach or suggest that "the organic crystalline particles comprise at least one of phenolphthalein, an organic crystalline compound derived from a reaction between a phenolic compound and phthalic anhydride, fluorescein, 1,5-naphthalenediol, anthraflavic acid, and terephthalic acid," as recited in claim 1, because the cited references do not teach or suggest the recited compounds. The cited references also do not teach or suggest that "the solid pyrotechnic composition is free of sulfur," as recited in claim 1, because nothing in the cited references teaches or suggests that their respective compositions are free of sulfur.

Since the cited references do not teach or suggest all the limitations of claim 1, the obviousness rejection is improper and should be withdrawn.

Claims 2-8, 10, 16-19, and 22 are allowable, *inter alia*, as depending from an allowable base claim.

Claim 10 is further allowable because the cited references do not teach or suggest that the organic crystalline particles comprise phenolphthalein.

Claim 22 is further allowable because the cited references do not teach or suggest that the solid pyrotechnic composition is free of charcoal.

Obviousness Rejection Based on U.S. Patent No. H72 to Wise et al. in view of U.S. Patent No. 5,320,691 to Weber, U.S. Patent No. 6,045,638 to Lundstrom, U.S. Patent No. 5,756,929 to Lundstrom et al., Lundstrom '269, and Fey

Claims 1-10, 16-19, 22, 66, and 67 stand rejected under Section 103 as being unpatentable over U.S. Patent No. H72 to Wise *et al.* ("Wise") in view of U.S. Patent No. 5,320,691 to Weber ("Weber"), U.S. Patent No. 6,045,638 to Lundstrom ("Lundstrom '638"), U.S. Patent No. 5,756,929 to Lundstrom et al. ("Lundstrom '929"), Lundstrom '269, and Fey. Claims 9, 66, and 67 have been canceled, rendering the rejection moot as to these claims. Applicant respectfully traverses this rejection as to the remaining claims, as hereinafter set forth.

Wise discloses a pyrotechnic composition having potassium nitrate, sulfur, and an organic crystalline compound as a fuel. The organic crystalline compound is fluorescein, phenolphthalein, 1,5-naphthalenediol, phenolphthalein, anthraflavic acid, or terephthalic acid. The composition includes 10 parts by weight of the sulfur.

Weber discloses an energetic composition having phenolphthalein, potassium nitrate, and sulfur. The composition includes from 8.5-11.4% by weight ("wt%") of the sulfur.

The Examiner relies on Lundstrom '638 as teaching multiple oxidizers, Lundstrom '929 as teaching the use of plural or single oxidizers, Lundstrom '269 as teaching the use of a single fuel with a plurality of oxidizers, and Fey as teaching that the fuel is ground to a fine particle size. *Id.* at p. 5-6.

The cited references do not teach or suggest all the limitations of the claimed invention because the cited references do not teach or suggest that “the solid pyrotechnic composition is free of sulfur” as recited in claim 1. Rather, the compositions of Wise and Weber utilize sulfur. In addition, Lundstrom ‘638, Lundstrom ‘929, and Lundstrom ‘269 disclose using sulfur as an ignition aid or as a ballistic modifier. As such, the cited references do not suggest that their respective compositions are free of sulfur.

Since the cited references do not teach or suggest all the limitations of claim 1, the obviousness rejection is improper and should be withdrawn.

Claims 2-8, 10, 16-19, and 22 are allowable, *inter alia*, as depending from an allowable base claim.

ENTRY OF AMENDMENTS

The amendments to claims 1, 6, 7, and 22 above should be entered by the Examiner because the amendments are supported by the as-filed specification and drawings and do not add new matter to the application.

Applicant considers claim 1 to be generic and notes that upon allowance of a generic claim, claims depending therefrom in a non-elected species would also be allowable. As such, claims 11-14, 20, 21, 23-25, 68, and 69 would be allowable as depending from claim 1.

CONCLUSION

Claims 1-8, 10-14, 16-25, 68, and 69 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, he is respectfully invited to contact Applicant's undersigned attorney.

Respectfully submitted,



Katherine A. Hamer
Registration No. 47,628
Attorney for Applicant
TRASKBRITT
P.O. Box 2550
Salt Lake City, Utah 84110-2550
Telephone: 801-532-1922

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KAH/dlm:ljb

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